### (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 25 August 2005 (25.08.2005)

**PCT** 

# (10) International Publication Number WO 2005/077273 A1

(51) International Patent Classification<sup>7</sup>: G01S 11/14

A61B 5/11,

(21) International Application Number:

PCT/FI2005/000086

(22) International Filing Date: 10 February 2005 (10.02.2005)

(25) Filing Language:

Finnish

(26) Publication Language:

English

(30) Priority Data:

20040215

12 February 2004 (12.02.2004)

(71) Applicant (for all designated States except US): NEWTEST OY [FI/FI]; Kiviharjuntie 11, FI-90220 Oulu (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): JÄMSEN, Ari [FI/FI]; Vesisuontie 23, FI-90420 Oulu (FI). RINTA-PAAVOLA, Anneli [FI/FI]; Virtaojantie 29, FI-90420 Oulu (FI). JÄMSÄ, Timo [FI/FI]; Hevostie 3, FI-90240 Oulu (FI). ISSAKAINEN, Jari [FI/FI]; Kalervontie 9 C 41, FI-90570 Oulu (FI).

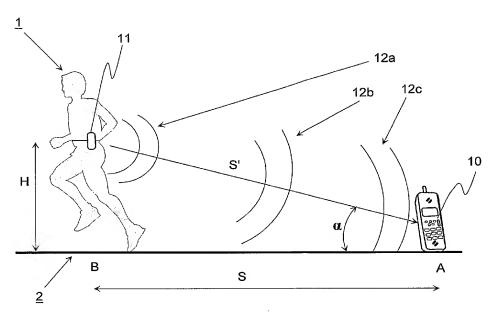
- (74) Agent: BERGGREN OY AB; Lentokatu 2, FI-90460 Oulunsalo (FI).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

with international search report

[Continued on next page]

#### (54) Title: METHOD FOR CALIBRATION OF STEP LENGTH AND ARRANGEMENT UTILIZING THE METHOD



(57) Abstract: The invention relates to a method for measuring the length of steps, a measuring arrangement utilizing the method and a sound transmitter and a sound receiver utilized in the measuring arrangement. In the method according to the invention, the distance (S) of the person (1) performing the measurement from a certain fixed point (B) is measured by means of synchronized sound frequency pulses (12a, 12b, 12c). The number of steps is measured by means of an acceleration transducer carried along by the person (1). The length of steps is obtained by dividing the distance advanced (S) by the number of steps (N).

## WO 2005/077273 A1



 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.